In the second embodiment the error signal feedback behaves similarly to feedback elements in a linear controls systems despite the non-linear nature of the CVT. Proportional, Proportional – Integral (P-I) feedback, Classical Proportional – Integral – Derivative (P-I-D) feedback or other well understood methods may be applied to achieve desired control.

CLAIMS:

1. A control methodology for regulating the power input and output of a inertial energy storage device, such as a flywheel. The control methodology utilizes a continuously variable transmission [CVT] and comprises control of the CVT speed ratio based on feedback of the CVT output force or torque

2. A control methodology for regulating the power input and output of a inertial energy storage device, such as a flywheel, as in claim 1 in which the CVT ratio is equal to the time integral of an error signal derived from operator input and feedback of a signal proportional to CVT output torque.

3. A control methodology for regulating the power input and output of a inertial energy storage device, such as a flywheel, as in claim 1 in which the CVT ratio is equal to a ratio - measured speed of the machinery divided by measured speed of the inertial energy storage device - plus an error signal derived from operator input and feedback of a signal proportional to CVT output torque

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